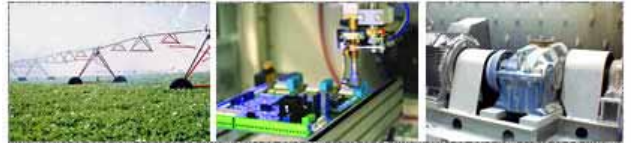


Drive Link



Serial communication from **Drive Dynamics**
Experts in Motor Control

Edition 4 • March 2007

Welcome to the first edition of Drive Link for 2007.

We have had an overwhelming response to our e-newsletter format and as such have decided to step up circulation for the coming year. So keep your eyes peeled!

Drive Dynamics continues to rapidly develop as NZ's premier supplier of AC motor control equipment. Expansion over the last twelve

months now sees Drive Dynamics offices located in Christchurch, Napier and Auckland. Local support is now literally on all our customer's doorsteps.

We trust you find this newsletter informative and if we can be of any assistance then please do not hesitate to contact us.

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Auckland office up and running



August 2006 saw the opening of Drive Dynamics Auckland office and Jeremy Insull appointed as the Manager of the Northern Region (North of Rotorua). Jeremy's role includes visiting customers on-site to evaluate motor control issues and requirements, quoting on appropriate solutions, and the commissioning and servicing of installed Drive Dynamics products.

Jeremy brings more than 20 years electrical engineering experience to this position, including a number of years as an application engineer for PDL Electronics. His most recent role

was three years as Auckland area manager for Vectek Electronics where he designed and supplied solutions to reduce industrial and commercial power quality concerns.

Jeremy's expertise is available on-tap to our northern customers and he can be contacted via the details below.

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SD250 Conduit Box

With a growing trend for low power VSDs to be directly wall mounted Drive Dynamics have released an easy to use Conduit Box for the SD250 range of variable speed drives.

The conduit box allows users to easily connect conduit fittings or cable glands directly to the base of the SD250 eliminating the need for additional enclosures or cabinets.

Installation is simply a matter of fitting the box to pre-existing fixing points within the SD250 and takes literally seconds!

Conduit Boxes are available for all seven models of the SD250 range (0.37kW to 7.5kW).

A frame one SD250 showing the optional conduit box and cover fitted.



Just how tough is the V5 Soft Starter!

Used in a diverse range of industries and processes, Decanters are designed to separate solids from a liquid/solid mixture. A decanter consists of a large steel bowl spun at high speed, often several thousand RPM, with a conveyor passing the liquid/solid mixture through it. Because the bowl is rotating faster than the conveyor passing through the decanter the liquid is separated from the solids by centrifugal force.

Getting the Decanter's steel bowl started and up to speed however is extremely challenging. A combination of the high inertia and high operating RPM often means these machines take minutes to get to full operational speed. A definite test for the motor, starting device and electrician's nerves!

Starting the bowl is normally achieved with the use of either a variable speed drive or a soft starter that has been oversized to allow for the high starting currents and extended starting time.

South Pacific Meats Ltd, an Invercargill based meat processing facility, recently undertook an expansion to their rendering plant including the installation of a 22kW Decanter and proved just how tough the V5 soft starter really is. With a large number of V5 soft starters already installed and on-site, confidence was high that a V50045 (standard 22kW unit) would successfully start the machine. Despite drawing 126Amps for two minutes the V5 performs faultlessly without tripping.



Corey Brett, SPM Engineering Manager, with the 22kW Decanter and V5 Soft Starter (inset).

International News

A large number of the old PDL international distributors have been in contact with Drive Dynamics for product support, introductions to Power Electronics and to purchase drives, starters and associated products. Since the demise of PDL this process has accelerated and we now sell product in Australia, Asia and South America. Our web site gets a huge number of hits and support (or lack of from others!) is a major issue for many customers, both in New Zealand and around the world.

“Drive Tips” –

Frequently Asked Questions

- When using a soft starter where do I connect power factor correction capacitors?

When using power factor correction in association with an electronic soft starter it is imperative that power factor correction capacitors be connected to the LINE side of the soft start device. The power factor correction capacitors should only be connected to the supply after the motor has completed its start. The V5 range of soft starters allows one of its output relays to be configured specifically for control of a power factor correction contactor, ensuring that contactor is closed only when the conditions are right.

- Can I over-speed my motor when using a VSD?

It is a very common application for VSDs to be used to over-speed a motor above its rated frequency. This often provides the user with additional control flexibility or even increased production. There are a couple of points that warrant deliberation if over-speeding is being considered:

- *When over-speeding the motors voltage to frequency ratio is changed. This results in the motor being able to produce less torque when operated in the areas above base speed.*
- *Is the mechanical transmission (motor and gearbox bearings etc) suitable for operation at a faster speed.*
- *Be careful to ensure that over-speeding the motor does not cause a motor overload. Some load types, such as centrifugal pumps and fans, will draw significantly increased current even for a small increase in speed.*

- My application requires only basic controls. Is there anywhere I can find control wiring and parameter set up information relating directly to the most common applications?

A full array of quick set up guides for the most common V5, SD250 and SD450 applications are available in the applications section of the Drive Dynamics website (www.drivedynamics.co.nz). This information provides control wiring schematics and basic commissioning parameters allowing you to get your application up and running with the minimum amount of effort.



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